

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-11 have been amended and claims 12-17 have been added as follows:

Listing of Claims:

Claim 1 (currently amended): An actuator for a pickup, comprising:
a fixed portion;
a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and
a plurality of linear elastic members of five or more each having ends connected to the movable portion and the fixed portion, respectively, wherein
wherein the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is larger than a dimension between connection portions of the linear elastic members connected to the movable portion, and
the plurality of linear elastic members have connection portions on a side of the fixed portion which are located on a first virtual circle, and connection portions on a side of the movable portion which are located on a second virtual circle.

Claim 2 (currently amended): The actuator for the pickup according to Claim 1, wherein the plurality of linear elastic members ~~extend in parallel to one another that are adjacent to each other when viewed from the tracking direction~~ are designed such that a dimension between the connection portions connected to the fixed portion is larger than a dimension between the connection portions connected to the movable portion.

Claim 3 (currently amended): The actuator for the pickup according to Claim 1, wherein the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between the connection portions connected to the fixed portion is different from a dimension between the connection portions connected to the movable portion; and

the linear elastic members that are adjacent to each other when viewed from the tracking direction are designed such that a dimension between the connection portions connected to the fixed portion is different from a dimension between the connection portions connected to the movable portion further comprising six of the linear elastic members.

Claim 4 (currently amended): [[The]] An actuator for [[the]] a pickup according to any one of Claims 1 to 3, further comprising: six of the linear elastic members a fixed portion;

a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and

a plurality of linear elastic members of four or more each having ends connected to the movable portion and the fixed portion, respectively, wherein:

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the linear elastic members that are adjacent to each other when viewed from the tracking direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the connection portions of the plurality of linear elastic members on a side of the fixed portion are located on a first virtual circle;

the connection portions of the plurality of linear elastic members on a side of the movable portion are located on a second virtual circle that is different from the first virtual circle; and
the two virtual circles have a virtual center line connecting centers thereof to each other,
the virtual center line intersecting at a single point with virtual extended lines extending in a longitudinal direction of the plurality of linear elastic members.

Claim 5 (currently amended): [[An]] The actuator for [[a]] the pickup according to Claim 4, further comprising:
a fixed portion;

a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and

a plurality of linear elastic members of four or more each having ends connected to the movable portion and the fixed portion, respectively, wherein:

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the linear elastic members that are adjacent to each other when viewed from the tracking direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the connection portions of the plurality of linear elastic members on a side of the fixed portion are located on a first virtual circle;

the connection portions of the plurality of linear elastic members on a side of the movable portion are located on a second virtual circle that is different from the first virtual circle; and

the two virtual circles have a virtual center line connecting centers thereof to each other, the virtual center line intersecting at a single point with virtual extended lines extending in a longitudinal direction of the plurality four of the linear elastic members.

Claim 6 (currently amended): The actuator for the A pickup device according to Claim 5, further comprising: four of the linear elastic members

an actuator for a pickup; and

an actuator drive portion for driving the actuator for the pickup, wherein

the actuator for the pickup includes: a fixed portion; a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and a plurality of linear elastic members of five or more each having ends connected to the movable portion and the fixed portion, respectively, wherein

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is larger than a dimension between connection portions of the linear elastic members connected to the movable portion, and

the plurality of linear elastic members have connection portions on a side of the fixed portion which are located on a first virtual circle, and connection portions on a side of the movable portion which are located on a second virtual circle.

Claim 7 (currently amended): A pickup device, comprising: the actuator for the pickup according to any one of Claims 1 to 6 and an actuator drive portion for driving the actuator for a pickup

an actuator for a pickup; and

an actuator drive portion for driving the actuator for the pickup, wherein

the actuator for the pickup includes: a fixed portion; a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and a plurality of linear elastic members of four or more each having ends connected to the movable portion and the fixed portion, respectively, wherein:

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the linear elastic members that are adjacent to each other when viewed from the tracking direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the connection portions of the plurality of linear elastic members on a side of the fixed portion are located on a first virtual circle;

the connection portions of the plurality of linear elastic members on a side of the movable portion are located on a second virtual circle that is different from the first virtual circle; and the two virtual circles have a virtual center line connecting centers thereof to each other, the virtual center line intersecting at a single point with virtual extended lines extending on the side of the moveable portion in a longitudinal direction of the plurality of linear elastic members.

Claim 8 (currently amended): A recording medium drive device, comprising [[the]] a pickup device according to Claim 5 including: an actuator for a pickup; and an actuator drive portion for driving the actuator for the pickup, wherein

the actuator for the pickup includes: a fixed portion; a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and a plurality of linear elastic members of five or more each having ends connected to the movable portion and the fixed portion, respectively, wherein

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is larger than a dimension between connection portions of the linear elastic members connected to the movable portion, and

the plurality of linear elastic members have connection portions on a side of the fixed portion which are located on a first virtual circle, and connection portions on a side of the movable portion which are located on a second virtual circle.

Claim 9 (currently amended): A method of producing an actuator for a pickup comprising a fixed portion, a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens, and a plurality of linear elastic members of five or more each having ends connected to the movable portion and the fixed portion, respectively,

~~the method comprising the steps of:~~

~~locating connection portions of the plurality of linear elastic members on a side of the fixed portion on a first virtual circle; and~~

~~locating connection portions of the plurality of linear elastic members on a side of the movable portion on a second virtual circle~~ recording medium drive device, comprising a pickup device including: an actuator for a pickup; and an actuator drive portion for driving the actuator for the pickup, wherein

the actuator for the pickup includes a fixed portion; a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and a plurality of linear elastic members of four or more each having ends connected to the movable portion and the fixed portion, respectively, wherein:

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the linear elastic members that are adjacent to each other when viewed from the tracking direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

the connection portions of the plurality of linear elastic members on a side of the fixed portion are located on a first virtual circle;
the connection portions of the plurality of linear elastic members on a side of the movable portion are located on a second virtual circle that is different from the first virtual circle; and
the two virtual circles have a virtual center line connecting centers thereof to each other,
the virtual center line intersecting at a single point with virtual extended lines extending on the side of the moveable portion in a longitudinal direction of the plurality of linear elastic members.

Claim 10 (currently amended): A method of producing an actuator for a pickup comprising a fixed portion, a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens, and a plurality of linear elastic members of [[four]] five or more each having ends connected to the movable portion and the fixed portion, respectively,

the method comprising the steps of:

disposing the linear elastic members that are adjacent to each other when viewed from the focusing direction such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from larger than a dimension between connection portions of the linear elastic members connected to the movable portion, in connecting the plurality of linear elastic members to the fixed portion and the movable portion;

~~disposing the linear elastic members that are adjacent to each other when viewed from the tracking direction such that a dimension between connection portions of the linear elastic~~

members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion, in connecting the plurality of linear elastic members to the fixed portion and the movable portion;

locating [[the]] connection portions of the plurality of linear elastic members on a side of the fixed portion on a first virtual circle; and

locating [[the]] connection portions of the plurality of linear elastic members on a side of the movable portion on a second virtual circle that is different from the first virtual circle; and

disposing the plurality of linear elastic members such that a virtual center line connecting centers of the two virtual circles to each other intersects at a single point with virtual extended lines extending in a longitudinal direction of the plurality of linear elastic members.

Claim 11 (currently amended): The method of producing the actuator for the pickup according to Claim [[9 or]] 10, further comprising the steps of:

installing the linear elastic members in a mold for molding the fixed portion and the movable portion; and

injecting a molten resin from an injection port of the mold to insert-mold the actuator for a pickup disposing the linear elastic members that are adjacent to each other when viewed from the tracking direction are disposed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is larger than a dimension between connection portions of the linear elastic members connected to the movable portion, in connecting the plurality of linear elastic members to the fixed portion and the movable portion.

Claim 12 (new): A method of producing an actuator for a pickup comprising a fixed portion, a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens, and a plurality of linear elastic members of four or more each having ends connected to the movable portion and the fixed portion, respectively,

the method comprising the steps of:

in connecting the plurality of linear elastic members to the fixed portion and the movable portion, disposing the linear elastic members that are adjacent to each other when viewed from the focusing direction such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

disposing the linear elastic members that are adjacent to each other when viewed from the tracking direction such that a dimension between connection portions of the linear elastic members connected to the fixed portion is different from a dimension between connection portions of the linear elastic members connected to the movable portion;

locating the connection portions of the plurality of linear elastic members on a side of the fixed portion on a first virtual circle;

locating the connection portions of the plurality of linear elastic members on a side of the movable portion on a second virtual circle that is different from the first virtual circle; and

disposing the plurality of linear elastic members such that a virtual center line connecting centers of the two virtual circles to each other intersects at a single point with virtual extended lines

extending on the side of the movable portion in a longitudinal direction of the plurality of linear elastic members.

Claim 13 (new): The method of producing the actuator for the pickup according to Claim 12, further comprising the steps of:

disposing the linear elastic members symmetrically about the centers of the two virtual circles.

Claim 14 (new): The method of producing the actuator for the pickup according to Claim 10, further comprising the steps of:

installing the linear elastic members in a mold for molding the fixed portion and the movable portion; and

injecting a molten resin from an injection port of the mold to insert-mold the actuator for a pickup.

Claim 15 (new): The method of producing the actuator for the pickup according to Claim 12, further comprising the steps of:

installing the linear elastic members in a mold for molding the fixed portion and the movable portion; and

injecting a molten resin from an injection port of the mold to insert-mold the actuator for a pickup.

Claim 16 (new): An actuator for a pickup, comprising:

a fixed portion;

a movable portion movable in each of a focusing direction extending along an optical axis of an objective lens and in a tracking direction substantially perpendicular to the focusing direction, for holding the objective lens; and

six linear elastic members each having ends connected to the movable portion and the fixed portion, respectively, wherein

the linear elastic members that are adjacent to each other when viewed from the focusing direction are designed such that a dimension between connection portions of the linear elastic members connected to the fixed portion is larger than a dimension between connection portions of the linear elastic members connected to the movable portion, and

the six linear elastic members have connection portions on a side of the fixed portion which are located on a first virtual circle, and connection portions on a side of the movable portion which are located on a second virtual circle.

Claim 17 (new): The actuator for the pickup according to claim 16, wherein

the first virtual circle and the second virtual circle have a common center, and

the center of the virtual circles serves as a rotating center of the movable portion.